

Serial No. 09/683,780
Attorney Docket No. 56162.000362

IN THE SPECIFICATION

Please amend paragraph 4 as follows:

A1 [0004] While this conventional solution may provide additional interface capabilities between an IC and circuit components, it has a number of limitations. For one, the addition of the control register 120 increases the complexity of the system. Likewise, the addition of the control register 120 typically increases the cost of development and manufacture of a system utilizing such a solution, as well as increases the size and power consumption of such a[[s]] system.

Please amend paragraph 22 as follows:

A2 [0022] As illustrated in Figure 2, the five circuit components 111-115 desired to interface with the IC 110 exceed[[s]] in number the four available GPIO lines 101-104. Known solutions, as discussed previously, typically require additional hardware to connect additional circuit components to the IC 110. However, in the event that there is at least one circuit component of circuit components 111-115 that only provides an input to the IC 110 and at least one circuit component that only receives an output from the IC 110, then these at least two of circuit components 111-115 (one to provide an input and one to receive an output) can share a single GPIO line 101-104 provided that either their input and output occur at essentially separate times or that their operation is not significantly effected by the switching of the GPIO line between an input line and an output line.

Please amend paragraph 25 as follows:

A3 [0025] In at least one embodiment, output to circuit component 115 and input from circuit component 114 may be attempted concurrently due to a high switching frequency of the shared GPIO line between an input line to an output line. For example, circuit component 114 can include a switch and circuit component 115 can include a LED. In this example, the IC 110 can switch between an input line to receive input caused by activating the switch (circuit component 114) and an output line to provide a voltage to the LED (circuit component 115). If the GPIO line 104 acts as an output line more often than an input line, ~~then~~ the appearance of the LED typically is unaffected, assuming the GPIO line 104 is switched faster than the

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a7 human flicker-fusion rate. Likewise, because the typical human reaction time is about 0.20 seconds and because the period between two input states of the GPIO line 104 typically is much less than this reaction time, the GPIO line 104 is switched to an input line during the switch activation period, and therefore the input from the switch is noted by the IC 110.

Please amend paragraph 29 as follows:

a4 [0029] As illustrated in Figure 4, the IC 110 can configure the GPIO direction register 240 to set the I/O direction assembly 204 to allow data or a signal to be output on the GPIO line 104 during a second time period ($t=2$). The IC 110 can then write data to the output buffer 214 during this second time period, where it is then provided to the circuit component 115 via the GPIO line 104. In this manner, the IC 110 may alternate between receiving from and providing data to circuit components 114, 115, respectively, as desired.

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